

Amendments to the Claims

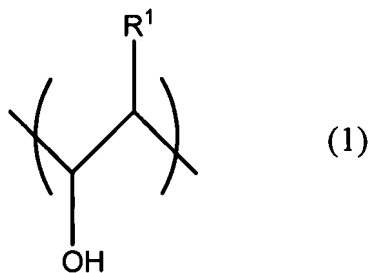
Please add new Claims 32-33. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1-15. (Cancelled)

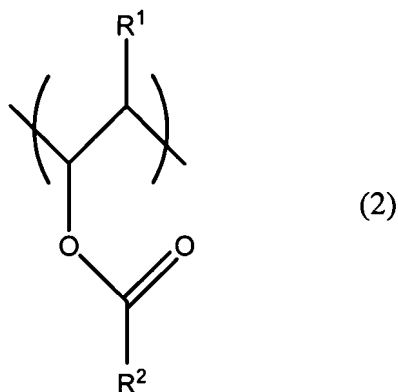
16. (Previously presented) A crosslinked polyvinyl acetal, characterized in that it can be obtained from at least one polyvinyl acetal (I), which can be obtained by reacting at least one polymer (A), which contains

a) 1.0 to 99.9 wt. % structural units of formula (1)



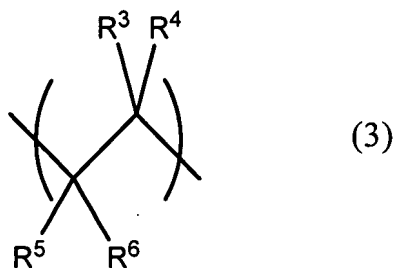
wherein R¹ denotes hydrogen or methyl,

b) 0 to 99.0 wt. % structural units of formula (2)



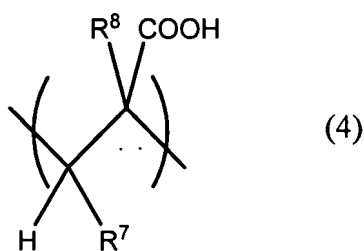
wherein R² represents hydrogen or an alkyl radical with 1 to 6 carbon atoms,

c) 0 to 70.0 wt. % structural units of formula (3)

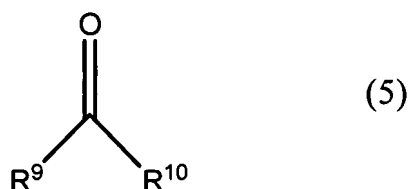


wherein R^3 , R^4 , R^5 and R^6 are, in each case independently of one another, radicals with a molecular weight in the range from 1 to 500 g/mol,

d) 0.0001 to 30.0 wt. % structural units of formula (4)



wherein R^7 and R^8 represent, in each case independently of one another, hydrogen, a carboxyl group or an alkyl group with 1 to 10 carbon atoms, which can optionally have one or more COOH groups as substituents, related in each case to the total weight of polymer (A), with at least one compound (B) of formula (5),

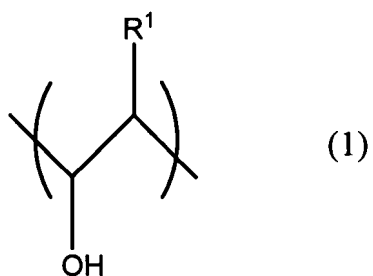


wherein R^9 and R^{10} are, in each case independently of one another, hydrogen, COOH, an alkyl group with 1 to 10 carbon atoms or an optionally substituted aryl group with 6 to 12 carbon atoms, whereby groups of formula (1) and of formula (4) are, at least in part, esterified with one another.

17. (Previously presented) The polyvinyl acetal according to claim 16, characterized in that its total content of esterified and non-esterified carboxyl groups lies in the range from 0.001 to 10.0 wt. %, related to the total weight of the polyvinyl acetal.
18. (Previously presented) The polyvinyl acetal according to claim 17, characterized in that its total content of esterified and non-esterified carboxyl groups lies in the range from 0.01 to 5.0 wt. %, related to the total weight of the polyvinyl acetal.
19. (Previously presented) The polyvinyl acetal according to claim 18, characterized in that its total content of esterified and non-esterified carboxyl groups lies in the range from 0.01 to 2.0 wt. %, related to the total weight of the polyvinyl acetal.
20. (Previously presented) The polyvinyl acetal according to claim 16, characterized in that it contains plasticiser.
21. (Previously presented) A method for the production of a polyvinyl acetal according to claim 16, characterized in that at least one polyvinyl acetal (I), optionally together with at least one plasticiser, is thermally crosslinked at compound temperatures in the range from 120° C to 280° C.
22. (Previously presented) The method according to claim 21, characterized in that the thermal crosslinking is carried out in an extruder, a kneading unit or another heatable unit.
23. (Previously presented) A moulding compound containing a polyvinyl acetal according to claim 16.
24. (Previously presented) The moulding compound according to claim 23 further containing a polyvinyl acetal with a weight mean of the molecular weight of less than 1,000,000 g/mol.
25. (Previously presented) The moulding compound according to claim 24, characterized in that the polyvinyl acetal with a weight mean of the molecular weight of less than 10,000,000 g/mol can be obtained by reacting at least one polymer (A'), which contains

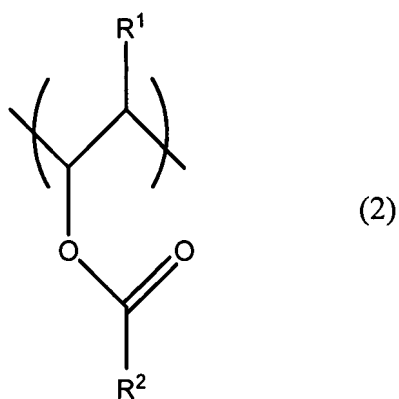
a) 1.0 to 99.9 wt. %

structural units of formula (1)



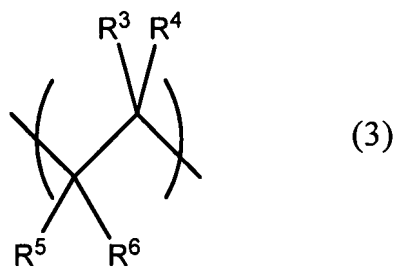
wherein R¹ denotes hydrogen or methyl,

b) 0 to 99.0 wt. % structural units of formula (2)



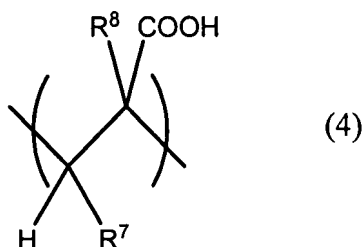
wherein R² represents hydrogen or an alkyl radical with 1 to 6 carbon atoms,

c) 0 to 70.0 wt. % structural units of formula (3)

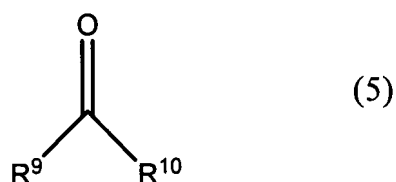


wherein R^3 , R^4 , R^5 and R^6 are, in each case independently of one another, radicals with a molecular weight in the range from 1 to 500 g/mol,

d) less than 0.1 wt. % structural units of formula (4)



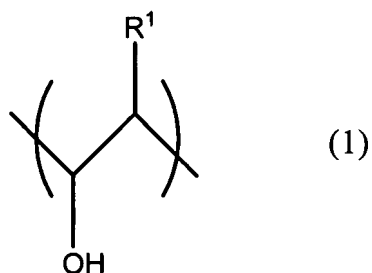
wherein R^7 and R^8 represent, in each case independently of one another, hydrogen, a carboxyl group or an alkyl group with 1 to 10 carbon atoms, which can optionally have one or more COOH groups as substituents, related in each case to the total weight of polymer (A'), with at least one compound (B') of formula (5),



wherein R^9 and R^{10} are, in each case independently of one another, hydrogen, COOH, an alkyl group with 1 to 10 carbon atoms or an optionally substituted aryl group with 6 to 12 carbon atoms, whereby groups of formula (1) and of formula (4) are, at least in part, esterified with one another.

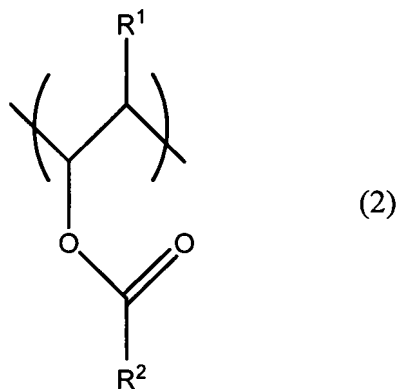
26. (Previously presented) The moulding compound according to claim 24, characterized in that the crosslinked polyvinyl acetal and the polyvinyl acetal with a weight mean of the molecular weight of less than 10,000,000 g/mol are present in a weight ratio in the range from 1:10 to 10:1.
27. (Previously presented) A film containing a moulding compound according to claim 23.

28. (Previously presented) Laminated safety glasses comprising a film according to claim 27.
29. (Previously presented) A coating containing a moulding compound according to claim 23.
30. (Previously presented) An ion-conductive interlayer in an electrochromic system comprising a moulding compound according to claim 23.
31. (Previously presented) A method for the production of a polyvinyl acetal according to claim 16, characterized in that at least one polyvinyl acetal (I) is thermally crosslinked at compound temperatures in the range from 120° C to 280° C.
32. (New) A crosslinked polyvinyl acetal, characterized in that it can be obtained from at least one polyvinyl acetal (I), which can be obtained by reacting at least one polymer (A), which contains
- a) 1.0 to 99.9 wt. % structural units of formula (1)



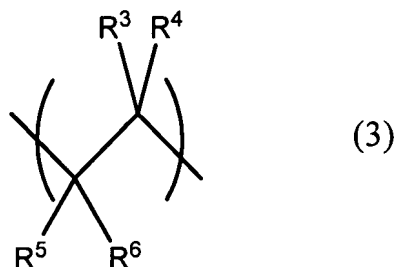
wherein R¹ denotes hydrogen or methyl,

- b) 0 to 99.0 wt. % structural units of formula (2)



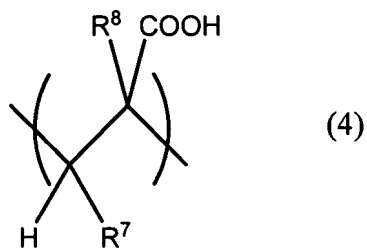
wherein R^2 represents hydrogen or an alkyl radical with 1 to 6 carbon atoms,

c) 0 to 70.0 wt. % structural units of formula (3)

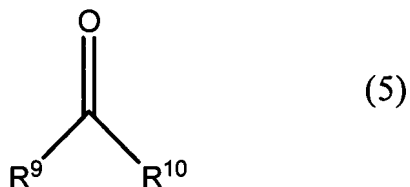


wherein R^3 , R^4 , R^5 and R^6 are, in each case independently of one another, radicals with a molecular weight in the range from 1 to 500 g/mol,

d) 0.0001 to 30.0 wt. % structural units of formula (4)



wherein R^7 and R^8 represent, in each case independently of one another, hydrogen, a carboxyl group or an alkyl group with 1 to 10 carbon atoms, which can optionally have one or more COOH groups as substituents, related in each case to the total weight of polymer (A), with at least one compound (B) of formula (5),



wherein R^9 and R^{10} are, in each case independently of one another, hydrogen, COOH, an alkyl group with 1 to 10 carbon atoms or an optionally substituted aryl group with 6 to 12 carbon atoms, whereby groups of formula (1) and of formula (4) are, at least in part, esterified with one another; and wherein at least 10 mol% of all carboxyl groups in the polyvinyl acetal are esterified.

33. (New) The crosslinked polyvinyl acetal polymer of Claim 32 wherein at least 20 mol% of all carboxyl groups in the polyvinyl acetal are esterified.